



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/494,954	02/01/2000	Roger A. McCurdy	TRW(TE)4170	4158

26294 7590 03/09/2005

TAROLLI, SUNDHEIM, COVELL & TUMMINO L.L.P.
526 SUPERIOR AVENUE, SUITE 1111
CLEVEVLAND, OH 44114

EXAMINER

LUM VANNUCCI, LEE SIN YEE

ART UNIT	PAPER NUMBER
----------	--------------

3611

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/494,954

Applicant(s)

MCCURDY, ROGER A.

Examiner

Ms. Lee S. Lum

Art Unit

3611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. In view of the Response to Notice of Non-Compliant Appeal Brief filed on 12/6/04, PROSECUTION IS HEREBY REOPENED. Rejections follow.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 is unclear because the first line in the body states "...said sensor module including:", after which an accelerometer, an acoustic sensor, a protection device, and controller, are recited. This language is inconsistent with the preceding claims (and the Spec) because only the crash sensors/accelerometers and the acoustic sensor were "included in the sensor module".

Art Unit: 3611

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-6, 14, 17, 20 and 22 (14 as best understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Hermann 6595544.

Hermann discloses a system for protecting a vehicle occupant comprising

Omni-directional, ultrasonic acoustic safing sensor 3 (c1, In 65-end, c3, In 25-37, and c5, In 42-44), and may be placed “centrally in the vehicle in the tunnel/rigid body component”; c2, In 5-7, and In 17-21),

Crash sensor/accelerometer 4, placed remote from the acoustic sensor, in a forward part of the vehicle (c4, In 26-28),

Occupant protection device (unidentified; c4, In 19-21), and,

Controller 5 controlling actuation of the device in response to separate signals from the sensors (c4, In 28-29).

The reference also discloses a method for controlling actuation of an occupant protection device, the steps derived from the structure/means provided above.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3611

A. Claims 3, 8-13, 15, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hermann in view of Foo et al 5746444.

Re Claim 3, Hermann discloses all elements as provided above, but does not disclose a sensor module* including the two types of sensors, while Foo shows module 38 including a plurality of accelerometers 40,42,44 (c4, ln 29-32), the module centrally located in the vehicle – fig 2. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include other types of sensors, such as acoustic, etc., to increase ease of assembly and access to the sensors, simultaneously placing them in a location which would maximize detection of anticipated types of crash events.

* “Module” is given its broadest reasonable interpretation – in this case, an assembly of electronic components.

Re Claims 8, 10, 11, 15, 18 and 19, Hermann discloses all elements as provided above, but does not disclose a plurality of accelerometers, while Foo shows this arrangement with sensors 40,42,44. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this configuration, as shown in Foo, to provide increased collision detection in more than one direction, thus increased accuracy and performance of the protection system. This objection is extremely well-known.

Re Claims 9, 12 and 13, Hermann discloses all elements as provided above, but does not disclose a sensor module* including an acoustic sensor, and at least one accelerometer, while Foo shows module 38 with at least one accelerometer. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include a plurality of sensors, as shown in Foo, to decrease assembly costs, and increase ease of access to the sensors. It is clear that the module may also include different types of sensors for this objective.

* “Module” is given its broadest reasonable interpretation – in this case, an assembly of electronic components.

Art Unit: 3611

B. **Claims 7, 16 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hermann in view of Gray et al 5620202.

Hermann discloses all elements as provided above, but does not disclose a side crush zone sensor/accelerometer, while Gray shows this sensor 18. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this sensor, as shown in Gray, to provide increased collision detection in more than one direction, thus increased accuracy and performance of the protection system. This objection is extremely well-known.

5. The prior art made of record, and not relied upon, is considered pertinent to the disclosure: Cavallaro 5574427.

6. RESPONSE TO REMARKS

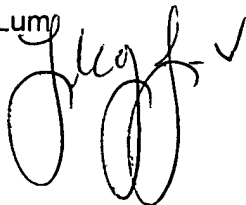
As explained above, upon reconsideration, Examiner has provided new rejections. She sincerely apologizes for the inconvenience.

7. Communication with USPTO/Examiner

Any inquiry concerning this communication, or others, should be directed to Ms. Lum at 571 272-6649, M-Th, 9-6. If attempts to reach the examiner are unsuccessful, her supervisor, Ms. Lesley Morris is at 571 272-6651. Our fax number is 703 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for unpublished applications: private PAIR only, for published applications: private or public PAIR. For more information re PAIR: <http://pair-direct.uspto.gov>. Questions re private PAIR: contact the Electronic Business Center (EBC) at 866 217-9197.

Ms. Lee S. Lum
Examiner
3/3/05



LESLEY D. MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600